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# Parental Resources and Relative Risk Aversion in Intra-secondary Transitions: A Trend Analysis of Non-standard Educational Decision Situations in the Netherlands

Nicole Tieben

The theory of rational educational decisions assumes that parental resources as well as status maintenance motives are relevant for educational decisions. A large body of previous research examines these mechanisms for standard educational decisions at the conventional transition points. There is reason to assume, however, that the same decision parameters affect non-standard educational transitions as well. Secondary education in the Netherlands is divided into four hierarchical tracks and students are allocated to one of these tracks at the age of 12 years. In the Dutch educational system upward and downward intra-secondary transitions between the different tracks are possible during secondary education. The analyses of this article show that upward mobility to a large extent is driven by status maintenance motives but that downward track mobility is not influenced by parental background when initial track placement is taken into account. While effects of parental resources decrease, the status maintenance motive does not change in relevance over time.

## Introduction

In the Netherlands, children are allocated to a number of different school types after primary education at the age of 12 years. The school types (tracks) differ in standards and prestige. Besides, each of these tracks results in specific eligibility for subsequent education. Secondary track placement therefore is crucial for the later educational career as it determines the future options and restrictions to a large extent. The allocation to the initial track to some extent is based on

meritocratic principles as previous performance is the most influential factor in the track placement of students. Despite the aim to realise meritocratic allocation, tracked systems are criticized for producing or enhancing social inequality because children from advantaged socioeconomic backgrounds have higher chances to end up in the higher and more favourable tracks (Diederén, 1981; Dronkers, 1983; Vrooman and Dronkers, 1986; Bronneman-Helmerts *et al.*, 2002). These children receive beneficial early socialization in their family of origin and profit from this advantage

already in primary education. Through the early assessment of future potential and division into performance levels these differences accumulate during secondary education. The Dutch educational system therefore maintains some flexibility and permeability between tracks so that students have the possibility to change to a higher or lower track during secondary education if an erratic initial track placement or the unexpected development of the performance makes this necessary.

From the perspective of social stratification the issue of track mobility becomes particularly relevant when corrections of the initial track occur in a socially selective way and either serve to secure advantages of privileged groups or to compensate for disadvantages. The opportunity to correct initial track placement can be used by children from disadvantaged backgrounds who are more prone to be placed in tracks below their actual potential (Kropman and Collaris, 1974). In this case, track mobility during secondary education can compensate at least partly for inequalities in initial track placement. On the other hand, children from more advantaged backgrounds, who are placed in lower tracks, can profit from family resources which facilitate the transition to a higher track. In this case, track mobility even amplifies the inequality that arises in the first transition from primary to secondary education. We argue, however, that it is not primarily the family resources that play a decisive role in the choice to change tracks but rather the motive of status maintenance. When the maintenance of the parental status is threatened by allocation to an insufficient initial track, a student is more likely to change to a higher track and less likely to change to a lower track. Considering this, the absolute social position should be less important for intra-secondary transitions than the parental position relative to the expected future position of their children. In this article, we therefore aim to approach the following research questions: To what extent are intra-secondary transitions socially selective? To what extent does the motive of status maintenance explain the background effects on intra-secondary transitions?

Furthermore, we examine if policy measures can influence the frequency and selectivity of intra-secondary transitions. In 1968, the Dutch government established an educational reform (mammoth law) with the aim to make secondary education more efficient, flexible, and meritocratic. The initial track placement and permeability between tracks has been improved. However, research on the effectiveness of the reforms in terms of frequency and selectivity of intra-secondary transition has not been carried out in the Netherlands before. Therefore, we propose the

following research questions: To what extent did the reform increase the number of intra-secondary transitions? To what extent did the reform reduce social selectivity of intra-secondary transitions?

## Theoretical Background

### General Theories of Educational Inequality

In the Netherlands, the track placement in secondary education is based to a large extent on the performance in primary school. This ensures that children are allocated to relatively homogenous learning groups and that they are neither overburdened nor get bored in class. But this meritocratic principle of allocation is also criticized for producing inequality. Children from higher educated backgrounds profit from a broad range of resources and parental support already in their pre-school socialization, so that they enter primary school with a head start compared to their classmates from less advantaged backgrounds. Cultural reproduction theory (Bourdieu, 1966, 1973) explains these differences in educational outcome with the fact that cultural and educational resources vary with social background. Parents with a high socioeconomic status transfer the knowledge, tastes, and preferences to their children in order to reproduce and secure the families' social status. Bourdieu assigns a central role to the distinctive and exclusionary character to the 'legitimate high status signals', *habitus* in Bourdieu's terminology that are valued and sanctioned in education and create a cultural gap between social classes (Lamont and Lareau, 1988). De Graaf (1989) points out that parental cultural resources indeed have a direct and positive effect on the cognitive competence of the child which results in a higher performance level. This is especially due to the stimulation of language skills through parental reading habits, while other dimensions of cultural capital do not have a positive effect. However, more recent approaches point out that the perspective of cultural reproduction might be too limited to explain background specific educational outcome. Empirical research (Bosker *et al.*, 1989; Dronkers, 1993) shows that even when measured performance is controlled for, family background effects on educational attainment are observed. Boudon (1974) assigns an equally important role to the parameters influencing educational decisions net of performance. The parameters influencing the educational outcome are divided into 'primary' and 'secondary' effects. Primary effects are those factors which directly influence the performance level—and these may actually be interpreted in the sense of cultural reproduction theory.

Secondary effects on the other hand, are responsible for the educational decisions within the individual opportunity structure. In other words, within the options that are available on basis of the performance, actual decisions are the result of a class-specific assessment of costs and risks (cf. Erikson and Jonsson, 1996; Breen and Goldthorpe, 1997; Jackson *et al.*, 2007). In recent empirical research (Breen and Goldthorpe, 1997; Need and Jong, 2001; Davies *et al.*, 2002; van de Werfhorst and Andersen, 2005; Breen and Yaish, 2006; Stocké, 2007) special attention is paid to the aspect of relative risk aversion. These works assume that it is the desire for intergenerational status maintenance that produces differential educational decisions. The core idea is that parents want their children to obtain an educational level which is sufficient to reach their own status. As children from lower-status parents can easily reach this aim by obtaining low or intermediate education, children from higher-status parents have to obtain higher educational levels in order to avoid status demotion.

To summarize, all theoretical approaches outlined in the above section would predict a higher initial track placement for children from advantaged socioeconomic backgrounds in the Netherlands. First, these children are more likely to show the required performance in primary school to be eligible to enter the higher tracks. Second, on top of the better performance they have a stronger tendency to choose the more ambitious tracks—given the same opportunity as their less advantaged classmates. However, the initial track placement may be erratic or undesired. Track allocation is to a certain extent based on a teacher assessment and recommendation at the end of primary school. The results of an aptitude test (CITO) deliver objective criteria for the allocation. Besides, ‘soft’ factors, like the motivation or behaviour of the students and their home situation may also influence the teachers’ recommendation (Luyten and Bosker, 2004; Driessen, 2005). In certain cases overambitious parents might interfere and negotiate a more desirable recommendation than originally planned. To a limited extent it is possible for parents to defy the rating of the teacher and place their child in a higher or lower than the recommended track. At the same time the teacher has the difficult task of predicting the future potential for performance development. As a result, the track choice, even when it does follow the teacher’s recommendation, might turn out to be suboptimal in terms of performance-track matching, either because of an inaccurate assessment of the students’ potential or because of an unexpected development of the performance level. Furthermore, initial track allocation can be optimal in terms of performance-track matching,

but undesirable in terms of relative risk aversion. Parents may strive to optimize their children’s chances for status maintenance by trying to place them in a sufficient track, but given the reality of their actual ability, this desire can be frustrated by insufficient performance of the child. In these cases students have the opportunity to correct initial track placement by changing to a higher or lower track.

Basically the same decision patterns that occur in the scheduled transition between primary and secondary education should occur in these intra-secondary transitions as well. Parental resources and the motive of status maintenance can contribute to the decision to either make a transition to a higher or to a lower track than the one chosen initially. The main difference between the scheduled transitions and intra-secondary transitions is that after allocation to secondary tracks, the students are already sorted by their performance level and, as far as this is correlated to parental resources, by family background. The next section of this article gives a brief overview of the Dutch educational system, followed by a description of the special decision situations given for intra-secondary transitions.

## The Dutch Educational System

At the age of 12 years children are allocated to one of four different tracks.<sup>1</sup> The tracks differ in standards and in the qualifications which can be obtained with a successful termination of the course. Pre-vocational education (LBO) takes 4 years and ideally prepares a student for entry into intermediate vocational education (MBO) where specific vocational skills are taught. Junior general education (MAVO) also takes 4 years and is meant to prepare for intermediate vocational education, but the curriculum of this track is more theoretical and less practically oriented than the lower vocational track. Pre-vocational education and junior general education ideally should lead into a subsequent intermediate vocational training at intermediate vocational schools (MBO). The third track is senior general secondary education (HAVO) which takes 5 years and prepares students for entry into lower tier tertiary education at a vocational college (HBO). The most prestigious pre-university track (VWO) gives eligibility for university entry and takes 6 years.

Graduates of pre-vocational and junior general education who enter the labour market without any additional vocational qualifications face severe disadvantages and risks of discontinuous employment, unemployment, and low wages (Traag *et al.*, 2005; Wolbers, 2008). Diploma from HAVO and VWO do

qualify for direct entry into the labour market, but ideally should be followed by tertiary education either at a university or a vocational college.

### Socially Selective Intra-secondary Transitions

Three different types of intra-secondary transitions can be distinguished—upgrades, downgrades, and supplement diploma.

Downgrades are mainly an option when the current educational track is too demanding and the student is at risk to fail the term. The main advantage of a downgrade is that it disburdens the student and increases his/her chance to complete the term and to leave education with a diploma. The disadvantage is that a lower graduation has to be accepted than the one initially aspired. A common strategy to avoid a downgrade is grade retention but this bears the drawback of an additional year in secondary education, going along with the additional direct costs and opportunity costs. It seems logical to expect that especially the children from lower socioeconomic backgrounds are most likely to experience a downgrade regarding their cultural and material resources at home. But at the same time these children also are less likely to make overambitious initial track choices in the first place, so to the contrary we have to expect the higher-background children to be the underperformers that are at risk to downgrade. Besides, a 'bottom effect' prevents downgrades for all children that are allocated to the lowest track. This should also work selectively on lower background students. It is therefore likely that the effects of parental background on downgrades as such are rather weak when the initial track placement is taken into account (Hypothesis 1).

The main difference between upgrades and supplement diploma is that an upgrade takes place before the first secondary diploma while a supplement takes place after the first diploma. Both are upward intra-secondary transitions and have the advantage of leading to a higher than the initially expected diploma. The disadvantages are higher direct and indirect costs and a higher risk of failure. Compared with an upgrade, supplement diplomas are a 'safe' option as the lower track has been completed and a first graduation is obtained already. If the student fails the supplement, he/she has no risk of finishing without any diploma. Upgrading, however, is more efficient than a supplement. While an upgrade is a direct route to a higher diploma, a student has to take an extra year in education for a supplement. Instead of directly

making a transition from the last year of the lower track into the next level, the student has to enter the class level below in order to compensate the faster learning progress in the higher track. This decreases the risk of failure but increases the opportunity costs.

Considering the fact that children from higher socioeconomic backgrounds profit from the cultural resources of their parents, they should be more likely to make upward intra-secondary transitions. On the other hand, they achieve higher performance scores already in primary school. They are more likely to be allocated to higher tracks in the initial track placement and the incentives for upgrades in these groups remain doubtful. Besides, ceiling effects prevent upgrades and supplements from the highest track. This works selectively on the advantaged students who are more likely to be allocated to these tracks. Effects of parental background on the risk of making upward intra-secondary transitions therefore should be rather weak if existing at all, when initial track is taken into account (Hypothesis 2).

The above-derived hypotheses show that no clear effects of parental background can be predicted for intra-secondary transitions because of the previous selection based on performance level and social background. We argued above, however, that this selection might not be perfect in terms of the desired status maintenance. Especially when a meritocratic track allocation is realized, teachers may decide to give a recommendation for a lower than the aspired track which is not sufficient for status maintenance. We suggest that especially in these cases an incentive for an upward intra-secondary transition is given. The motive of status maintenance implies that the decision to make intra-secondary transitions is not influenced by the education of the parents as such but rather by the relation of the parental status and the status that can be reached by the child with a diploma from the initial track. Children that have entered an initial track that is insufficient for status maintenance therefore should be more likely to make upward intra-secondary transitions than children who are allocated to a sufficient track (Hypothesis 3).

### Trends

In 1986, the Dutch government implemented far-reaching educational reforms in order to flexibilize the educational systems and improve meritocracy. These reforms probably had an effect on the frequency and selectivity of intra-secondary transitions. The main aim was to improve the initial track allocation by introducing the CITO test and teacher recommendation.

The permeability between tracks should be improved by the pooling of different school types to school communities, which comprise different tracks under one roof and administration. This facilitates intra-secondary transitions by reducing transaction costs like the administrative effort or simply the fact that the student has to leave his school and classmates and has to get accomplished to new surroundings after an intra-secondary transition. Besides, a comprehensive bridge year was introduced to postpone the definite allocation by 1 year and make the placement less erratic. Regarding intra-secondary transitions, this reform has the following consequences: first, the need for intra-secondary transitions for reasons of performance mismatch possibly has been reduced, while the transitions as such were facilitated. On the other hand, the intra-secondary transitions for reasons of status-track mismatch might have increased, because initial track allocation has to be justified by actual performance after the reform. It is therefore hardly possible to make predictions regarding the incidence rate of intra-secondary transitions. Besides, the general educational expansion also leads to an increase of participation in the higher tracks and a decrease of participation in lower tracks, so that ceiling and bottom effects would increase the number of downgrades and decrease the number of upgrades and supplements. Nevertheless, the reform has removed barriers for making intra-secondary transitions. This might have stimulated upward intra-secondary transitions of children from less advantaged backgrounds who tend to make cautious initial track choices. Effects of absolute parental background on the risk of making upward intra-secondary transitions therefore should decrease after the introduction of mammoth law (Hypothesis 4a). On the other hand, there is no reason to assume that the motive of relative risk aversion is affected by changes in institutional barriers. Effects of relative parental background on the risk of making upward intra-secondary transitions therefore should remain stable after the introduction of mammoth law (Hypothesis 4b).

## Data and Variables

For the empirical test we used the Family Survey of the Dutch Population (Ultee and Ganzeboom 1992; de Graaf, de Graaf, Kraaykamp and Ultee, 2002, 2003, 2004). This is a four-wave (1992, 1998, 2000, 2003) repeated cross-sectional retrospective life-course study on a representative sample of the Dutch population. The dataset contains detailed retrospective information

about the educational careers of each of the approximately 7500 respondents as well as socioeconomic situation in the family of origin. We used only respondents who entered secondary education between their 10th and 14th year of age and who reported a track placement in an institution of secondary education.

The dependent variable is a four-category variable indicating the type of intra-secondary transition with the categories 'no intra-secondary transition', 'downgrade', 'upgrade', and 'supplement'. The distribution of this variable can be obtained from the bottom row of Table 1.

For bivariate and multivariate analyses, we used the following independent variables: Sex (male = 0; female = 1). The year of the transition to secondary education was clustered into 5-year periods, except for the first and last cohorts; these are broader due to sample size. The distribution of this variable can be found in the last column of Table 2. Initial track is classified in four categories. In the Netherlands, especially in the pre-reform period,<sup>2</sup> a multitude of different school types exists in secondary education and therefore several types, which are comparable, were clustered into four main types (LBO, MAVO, HAVO, VWO) in order to maintain lucidity and parsimony of the analyses.<sup>3</sup> Figure 1 shows the distribution of this variable.

The parental status was operationalized with education of the parents. The dataset contains information of the final educational attainment of both parents. The educational level of the highest educated parent is the basis for a three category variable of parental education. Parents with only primary education or lower secondary education are coded as low-educated (=1), parents with higher secondary or vocational training are coded as medium educated (=2), and parents with tertiary and post-tertiary education are coded as highly educated (=3). For testing the hypothesis of relative risk aversion, we constructed the 'relative education' of the parents. This is a dummy indicating whether the child is allocated to a track from which it is not possible to reach the parental educational level without making an upward intra-secondary transition. The underlying assumption is that children have to obtain at least the same educational level as their own parents to reach the same status in the future. This assumption in fact is problematic regarding the educational expansion in the Netherlands and the resulting diploma inflation. If a devaluation of educational credentials has to be taken into account, the same educational level would not be sufficient for status maintenance. However, this also implies that parents have to anticipate and evaluate the



future performance of their children when the child is 12 years old. It may be argued that parents at this point only have a limited view on the returns of educational credentials and rather take their own educational attainment as a benchmark. Van de Werfhorst and Andersen (2005) discuss the effects of diploma inflation on educational decisions and come to the conclusion that especially the later transitions are influenced by decreasing returns but that decisions in secondary education remain largely untouched by diploma inflation.

## Results

### Bivariate Analyses

Figure 1 displays the distribution of initial track placement when the students first entered secondary education. We find a strong growth of HAVO participation and a decrease in LBO participation. For MAVO and VWO we rather observe some trendless fluctuations than a clear trend. We may conclude from this development that the population at risk to make a downgrade increases over time while the population at risk for upward transitions remains more or less stable. Table 1 shows the percentage of intra-secondary transitions per school type. The chances of LBO and VWO students to make any kind of intra-secondary transitions are lower than those of students who entered the middle tracks (which probably is a consequence of the fact that they can move only in one direction), but VWO-students have a high risk to downgrade (11 per cent). The

upgrade rates are very low irrespective of track, only 1 per cent of the whole population make an upgrade. However, the supplements are more popular, a total of 8 per cent uses this pathway to obtain a higher graduation than aimed at in the initial track. The supplement rate is highest in MAVO, which is not surprising, because obtaining a HAVO supplement gives eligibility to enter tertiary education in a vocational college. The additional qualification probably is a considerable payoff. In general, MAVO students are most mobile.

Table 2 shows the development of the first intra-secondary transition across cohorts. We find a clear increase in total mobility from the 1966–1970 cohorts on, which mainly can be attributed to the increase in supplements. Upgrade rates drop from a quite high level in the first two cohorts and fluctuate in all subsequent cohorts without a clear trend. We also observe a slight increase in downgrade rates from the 1966–1970 cohorts on. This indicates that the introduction of the mammoth law indeed triggered an increase in intra-secondary transitions. Therefore, we further scrutinize this with the help of multivariate analyses.

### Multivariate Analyses

In the above analyses we can use a total of 6,337 respondents and we found that 14.6 per cent of these students make at least one intra-secondary transition. With traditional bivariate methods we can only examine one transition per respondent but our data reveal that a considerable share of students makes

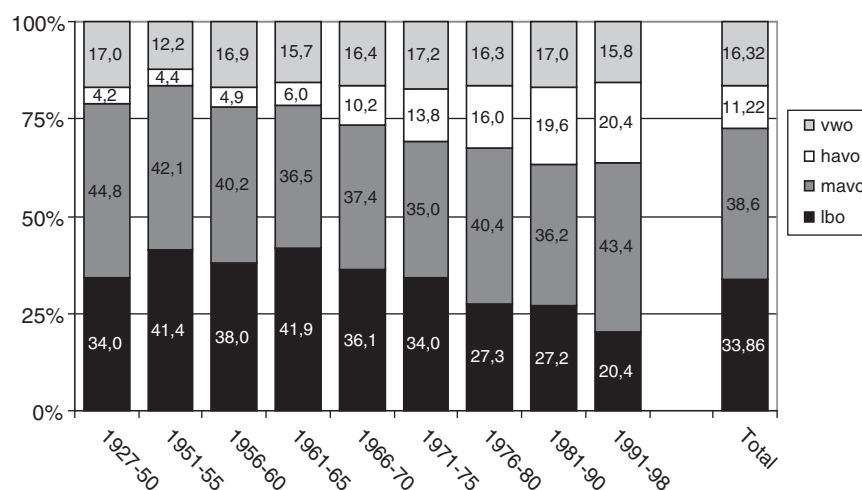


Figure 1 Distribution of initial track allocation by cohort

**Table 1** Intra-secondary transitions by initial track allocation

	No change		Downgrade		Upgrade		Supplement		Total N
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	
LBO	2054	95.7	0	0	14	0.7	78	3.63	2146
MAVO	1851	75.7	188	7.69	47	1.9	360	14.7	2446
HAVO	585	82.3	63	8.86	4	0.6	59	8.3	711
VWO	920	89	114	11	0	0	0	0	1034
Total	5410	85.4	365	5.8	65	1.0	497	7.8	6337

**Table 2** Intra-secondary transition by birth-cohort

Period entry secondary education	No change		Downgrade		Upgrade		Supplement		Total N
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	
1927–1950	528	92.5	24	4.2	14	2.5	5	0.9	571
1951–1955	395	90.8	17	3.9	8	1.8	15	3.5	435
1956–1960	669	91.8	34	4.7	6	0.8	20	2.7	729
1961–1965	656	88.7	39	5.3	7	1.0	38	5.1	740
1966–1970	699	81.1	51	5.9	8	0.9	104	12.1	862
1971–1975	807	81.4	61	6.2	10	1.0	113	11.4	991
1976–1980	724	82.1	69	7.8	3	0.3	86	9.8	882
1981–1990	803	82.4	58	6.0	8	0.8	106	10.9	975
1991–1998	129	84.9	12	7.9	1	0.7	10	6.6	152
Total	5410	85.4	365	5.8	65	1.0	497	7.8	6337

more than one transition in different sequences. Of all respondents, 837 (13 per cent) make only one transition during their educational career, 83 (1.3 per cent) make two transitions and 7 (0.1 per cent) even make three transitions. In order to take all transitions into account instead of only the first, we developed a person-transition file, which contains one spell for each respondent and additional spells for the second and third transition. Based on this dataset, we obtain a total of 6,434 spells. About 5410 (84.1 per cent) of these make no intra-secondary transition, 382 (5.9 per cent) downgrade, 76 (1.2 per cent) upgrade and 566 (8.8 per cent) take a supplement. All following analyses will be based on these data.

In Table 3 we present the results of four hierarchical multinomial logit models. The dependent variable contains the three types of intra-secondary transitions and the category ‘no track-mobility’ as reference. The coefficient for sex shows that being male has a negative effect on the chance to upgrade (relative to girls), while there are no gender differences for downgrades and

supplements. This pattern is consistent throughout all models.

Having highly educated parents improves the chances of making any kind of intra-secondary transition. However, effects for children of middle-educated parents on upgrading are not significant. Introducing the relative education of the parents results in a negative effect for downgrades. Both coefficients for upward transitions are positive. It is especially remarkable that the effect for the absolute education of the parents disappears under control of the relative education, while the coefficient for relative education itself is very high, which corroborates our hypotheses that upgrading indeed is driven by status maintenance motives to a large extent. The effect for supplements is weaker but we also observe strong control effects on the absolute education.

Model 3 controls for initial track placement. As in a multinomial regression we have to insert all initial tracks simultaneously, we have the problem of perfect predictions for upgrades/supplements from VWO and downgrades from LBO. We therefore constrained these



**Table 3** Results of multinomial logit regression of intra-secondary transitions (logit coefficients)

	M1			M2			M3			M4		
	DN	UP	SUP	DN	UP	SUP	DN	UP	SUP	DN	UP	SUP
Intercept	-2.81***	-4.34***	-2.77***	-2.82***	-4.32***	-2.76***	-3.05***	-3.97***	-2.30***	-2.93***	-4.34***	-1.73***
Sex ( $\delta$ )	-.11	-0.56*	-0.05	-0.10	-0.60*	-0.07	-0.08	-0.60*	-0.09	-.11	-0.61*	-0.16
Educ. parents low (ref.)												
Educ. parents middle	0.35**	0.33	0.99***	0.43***	0	0.81***	0.06	-0.20	0.51***	-0.07	-0.15	0.21
Educ. parents high	0.60	1.08***	0.92***	0.82***	0.36	0.47***	-0.07	-0.04	0.15	-0.19	0	-0.46**
Educ. parents same or lower than students' (ref.)												
Educ. parents higher initial/current track				-0.42**	1.06***	0.68***	0.14	1.35***	1.07***	0.15	1.33***	1.11***
LBO							0	-0.76	-1.16***	0	-0.74*	-1.22***
MAVO (ref.)												
HAVO							0.96***	-0.47	-0.19	0.82***	-0.41	-0.48***
VWO							1.17***	0	0	1.20***	0	0
Year of transition												
1927-1945										-1.04*	0.02	-2.68***
1946-1950										-0.47	0.68	-3.09***
1951-1955										-0.67*	1.15**	-2.37***
1956-1960										-0.53*	0.24	-1.87***
1961-1968										-0.07	0.18	-1.14***
1969-1975 (ref.)												
1976-1980										0.22	0.19	0.08
1981-1999										0.38*	0.41	0.41***
Pseudo $R^2$			0.02			0.03			0.05			0.09
Log pseudolikelihood			-3634.39			-3608.73			-3524.81			-3358.08
Wald $\chi^2$ (df)			127.03 (9)			208.49 (12)			333.20 (18)			515.58 (39)
N (Events)	379	76	565	379	76	565	379	76	565	379	76	565
N (Episodes)			6359			6359			6359			6359
N (Persons)			6262			6262			6262			6262

\*\*\* $p < 0.001$  \*\* $p < 0.01$  \* $p < 0.05$   $P > 0.1$ ; DN, downgrade; UP, upgrade; SUP, supplement; reference category = no intra-secondary transition.

transitions to be zero. We observe that initial track placement completely explains the effects of absolute and relative education of the parents on downgrading, the effects collapse to insignificance under control of initial track. We observe some control effects on the upward changes but the main conclusions from Model 2 regarding upgrades and supplements remain largely untouched. We observe that students who were placed in HAVO or VWO have a higher chance to downgrade than students of MAVO, while MAVO students have the highest chances of being upwardly mobile either by upgrading or by taking a supplement diploma.

## Effects of Reforms

In Model 4 we added cohort dummies for 5-year periods<sup>4</sup> in order to test trends. As we have exact information on the timing of each transition, we chose to use the year of transition. This has the advantage that we can avoid a lag for supplements which can be taken 3 years after entry to secondary education at minimum, while upgrade and downgrade are possible in the first year. Doing so, we can exactly trace the effects of the reform in 1968. For the same reason we set the 1969–1975 cohort as reference category. We find weak evidence for an increase of the downgrade rate after 1968. However, the coefficients clearly change from negative in the previous cohorts to positive in the subsequent cohorts. For upgrades we do not find any evidence for changes over time, except for one sporadic outlier in the 1951–1955 cohort<sup>5</sup>. However, supplements clearly and massively increase after 1968, although we have to acknowledge that we also observe a continuous increase in the pre-reform cohorts. In order to verify the effects of the mammoth law on the selectivity of intra-secondary transitions, we ran two models replacing the cohort-dummies by a reform dummy, which is one for all transitions that took place after introduction of the reform. The coefficients of these models are displayed in Table 4. The general pattern of all effects presented in the previous models remains more or less unchanged. Therefore we only report effects of the dummies and its interactions. As observed in the more detailed models we find a clear increase of the frequency of downgrades and supplements in the post-reform period but not for upgrades (Model 5). A detailed diagnosis of the frequency distribution (as summarized in Table 2) shows, however, that we observe an increase that can be directly attributed to the mammoth law only for supplements. We find a sudden and clear increase of the percentage of students who take a supplement from 1968 on. For downgrades, the effect of the reform

dummy can be explained with a more or less unbroken linear increase of the downgrade frequency and for upgrades we find a curvilinear pattern<sup>6</sup>. To test whether the reform also had an effect on the effects of parental education, we introduced interactions with the indicators for parental education. In Model 5 we do not find a change of effects of absolute or relative education of the parents for downgrades and upgrades, which again corroborates our finding from the previous section that absolute education of the parents is irrelevant for these intra-secondary transitions. However, we do find a strong decrease of effects of absolute education for supplements over time.

## Conclusions

Our analyses show that children from advantaged backgrounds are more prone to make any type of intra-secondary transition, but that these effects disappear when initial track placement and relative education are taken into account. Children with highly educated parents are more likely to be placed in higher educational tracks and this increases their risk to make downgrades. In the case of downgrading neither the parental resources (absolute education) nor the relative risk aversion have an influence on the downgrade propensity. Effects of parental background are entirely explained by initial track placement.

Comparing the effects of parental background on upgrades and downgrades reveals that absolute education of the parents does not add to the chances of making an upgrade while having parents with upper secondary or vocational education increases the chances for making a supplement. This indicates that supplements also are taken by children of higher-educated parents who are not threatened by status demotion. Most interesting is the fact that effects of middle education of the parents decrease from a very high level in the pre-reform period to insignificance in the post-reform period. This indicates that supplements especially for children of lower-educated parents became a popular strategy to obtain a higher graduation than the diploma obtained in the initial track. According to our expectation, the effects of relative education of the parents do not change over time. There is no reason to expect that the impact of the motive of status maintenance on the decision to make intra-secondary transitions decreases across time. Furthermore, policy measures also are unlikely to have an effect.

To summarize, we can say that downgrading is not associated with parental background but rather with the initial track placement. We suggest that

**Table 4** Results of multinomial logit regression of intra-secondary transitions (logit coefficients), trend-interactions included in models

	DN	M5 UP	SUP	DN	M6 UP	SUP
Intercept	−3.31***	−3.88***	−3.44***	−3.32***	−4.06***	−4.06***
Sex (♂)	−0.09	−0.60*	−0.14	−0.09	−0.61	−0.13
Educ. parents low (ref.)						
Educ. parents middle	−0.03	−0.16	0.27*	0.01	0.18	1.33***
Educ. parents high	−0.15	0.01	−0.38*	−0.04	0.41	0.34
Educ. parents same or lower than students' (ref.)						
Educ. parents higher	0.15	1.35***	1.11***	−0.05	1.30***	1.08***
initial/current track						
LBO	0	−0.75*	−1.20***	0	−0.75*	−1.19***
MAVO (ref.)						
HAVO	0.85***	−0.42	−0.44***	0.85***	−0.41	−0.43***
VWO	1.18***	0.00	0	1.18***	0	0
Year of transition						
Before 1968 (ref.)						
After 1968	0.54***	−0.25	1.83***	0.56***	0.19	2.55***
Interactions with reform						
Educ. parents middle				−0.06	−0.76	−1.23***
Educ. parents high				−0.17	−0.89	−0.84*
Educ. parents higher				0.26	0.14	0.02
Pseudo $R^2$			0.09			0.09
Log pseudolikelihood			−3386.92			−3377.39
Wald $\chi^2$ (df)			515.83 (21)			457.75 (30)
N (Events)	379	76	565	379	76	565
N (Episodes)			6359			6359
N (Persons)			6262			6262

\*\*\* $P < 0.001$  \*\* $P < 0.01$  \* $P < 0.05$   $P > 0.1$ ; DN, downgrade; UP, upgrade; SUP, supplement; reference category = no intra-secondary transition.

downgrades generally are more driven by insufficient performance than by background features of the students. Upgrades are rare and apparently restricted to the special group of students who were placed in an initial track that is not sufficient to reach the parental status. Status maintenance pressure for these students seems to be so high that they do not hesitate to take the risk and effort to upgrade. Considering supplements we found that these became an increasingly popular path to obtain a higher graduation than the first diploma. The supplement from MAVO is especially popular. We assume that a supplement which results in a HAVO diploma is especially attractive because the direct and indirect costs of obtaining such a supplement are low and the payoff of having a HAVO diploma is high as HAVO-graduates are eligible to enter lower tier tertiary education. Besides, the repetition year seems to offer extra security instead of being discouraging. Children of low-educated parents

can profit from this opportunity and compensate the disadvantage they had in previous transitions. However, for supplements status maintenance seems to be a strong impetus as well.

One of the aims of the reform was to create a more flexible educational system and to improve the opportunity to change to a higher track during secondary education. Lower class children should especially profit from the improved permeability and compensate disadvantages they had in previous transitions. Another aim of the reforms was to improve initial track placement so it is inappropriate to evaluate the success of the reform purely by the effect it had on the frequency of intra-secondary transitions. Apparently, the reform did not have a pronounced effect on the frequency of upgrades but supplements became more popular after the reform and the frequency of downgrades even decreased. This might indicate that the reform was successful in improving the initial track

placement because early corrections occur less often. The increase in supplements is plausible because a supplement is a safe way to obtain a higher graduation. Besides, the supplement perhaps is not a correction of the earlier track placement but rather an additional qualification. Labour market requirements possibly even increased the demand for supplements in the last decades. The supplement also became more attractive for the lower social classes and the effects of absolute parental education decreased after the reform. However, all intra-secondary transitions enhance the advantage of the higher social classes instead of helping to compensate the disadvantage. The effect of the reform is that the accumulation of advantages is reduced at least regarding the supplements, but not reversed.

We acknowledge that the main driving force for intra-secondary transitions is probably the performance of the child which to a large extent sets the latitude for changing tracks. We gained valuable insight into the role of family background but nevertheless the pseudo- $R^2$  suggests that they do not offer an exhaustive explanation of the mechanisms behind intra-secondary transitions. In future research, it would be desirable to integrate performance measures to scrutinize on the interplay between performance, recommendation, track-placement, family background, and intra-secondary transitions.

## Notes

1. From 1968 on, the government introduced so-called bridge classes which pooled two or more of these tracks for 1 year. The aim of this policy was to postpone the final decision for one of these tracks and reduce erratic placement. For this work, data were used which do not contain information on the allocation to a bridge class, the initial track placement thus is a retrospective reconstruction of the final placement.
2. A recent reform (1999) also has pooled LBO and MAVO to a new type VMBO (intermediate pre-vocational education).
3. LBO ('lower vocational education')=LBO; huishoudsschool ('school for home economics')=LBO; VBO ('pre-vocational education')=LBO; MAVO ('intermediate general education')=MAVO; ULO ('extended lower education')=MAVO; MULO ('more extended lower education')=MAVO; HAVO ('higher general

education')=HAVO; MMS ('intermediate school for girls')=HAVO; VWO ('pre-university education')=VWO; HBS ('higher school for citizens')=VWO; Atheneum ('gymnasium for modern languages')=VWO; Gymnasium ('grammar school')=VWO.

4. Except for the first period, which is 10 years, due to the small number of observations in the early cohorts.
5. Note that  $N$  is small in this category and that this result may be due to weak statistical power.
6. This has been verified with a further multivariate analysis, using a regression discontinuity model on a linear trend (cf., Shadish *et al.*, 2002). Results are available upon request.

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## References

- Bosker, R., van der Velden, R. and Otten, L. (1989). Sociaal Milieu en de Onderwijsloopbaan. *Sociale Wetenschappen*, 32, 221–238.
- Boudon, R. (1974). *Education, Opportunity, and Social Inequality. Changing Prospects in Western Society*. New York: Wiley.
- Bourdieu, P. (1966). L'école conservatrice. Les inégalités devant l'école et devant la culture. *Revue Française De Sociologie*, 7, 325–347.
- Bourdieu, P. (1973). Kulturelle Reproduktion und Soziale Reproduktion. In Bourdieu, P. and Passeron, J. C. (Eds.), *Grundlagen einer Theorie der Symbolischen Gewalt*. Frankfurt: Suhrkamp, pp. 91–138.
- Breen, R. and Goldthorpe, J. (1997). Explaining educational differentials: towards a formal rational action theory. *Rationality and Society*, 9, 275–305.
- Breen, R. and Yaish, M. (2006). Testing the Breen-Goldthorpe Model of educational decision making.

- In Morgan, S. L., Grusky, D. B. and Fields, G. S. (Eds.), *Mobility and Inequality: Frontiers of Research in Sociology and Economics*. Stanford CT: Stanford University Press, pp. 232–258.
- Bronneman-Helmers, H. M., Herweijer, L. J. and Vogels, H. M. G. (2002). *Voortgezet onderwijs in de jaren negentig*. Den Haag: SCP.
- Davies, R., Heinesen, E. and Holm, A. (2002). The relative risk aversion hypothesis of educational choice. *Journal of Population Economics*, **15**, 683–713.
- de Graaf, P. M. (1989). Cultural reproduction and educational stratification. In Bakker, B. F. M. et al. (Eds.), *Educational Opportunities in the Welfare State: Longitudinal Studies in Educational and Occupational Attainment in the Netherlands*. Nijmegen: Institute for Applied Social Science, pp. 39–55.
- de Graaf, N. D., de Graaf, P. M., Kraaykamp, G. and Ultee, W. C. (2002). *Family Survey Dutch Population 2003*. Nijmegen: ICS Codebook, 54.
- de Graaf, N. D., de Graaf, P. M., Kraaykamp, G. and Ultee, W. C. (2003). *Family Survey Dutch Population 2003*. Nijmegen: ICS Codebook, 55.
- de Graaf, N. D., de Graaf, P. M., Kraaykamp, G. and Ultee, W. C. (2005). *Family Survey Dutch Population 2003*. Nijmegen: ICS Codebook, 81.
- Diederien, J. (1981). From year to year: the passage of young people from different social backgrounds through Dutch primary and secondary education. *The Netherlands' Journal of Sociology*, **17**, 11–21.
- Driessen, G. (2005). De totstandkoming van de adviezen voortgezet onderwijs: invloeden van thuis en school. *Pedagogiek*, **25**, 279–298.
- Dronkers, J. (1993). Educational reform in the Netherlands: Did it change the impact of parental occupation and education? *Sociology of Education*, **66**, 262–277.
- Erikson, R. and Jonsson, J. O. (1996). Explaining class inequality in education: the Swedish test case. In Erikson, R. and Jonsson, J. O. (Eds.), *Can Education be Equalized? The Swedish Test Case*. Boulder, CO: Westview, pp. 1–63.
- Jackson, M., Erikson, R., Goldthorpe, J. H. and Yaish, M. (2007). Primary and secondary effects in class differentials in educational attainment. *Acta Sociologica*, **50**, 211–229.
- Kropman, J. A. and Collaris, J. W. M. (1974). *Van Jaar tot Jaar. Onderzoek Naar de School- en Beroeps carrière van Jongens en Meisjes die in 1965 het Lager Onderwijs Verlieten*. Nijmegen: ITS.
- Lamont, M. and Lareau, A. (1988). Cultural capital: allusions, gaps and glissandos in recent theoretical developments. *Sociological Theory*, **6**, 153–168.
- Luyten, H. and Bosker, R. J. (2004). Hoe meritocratisch zijn schooladviezen? *Pedagogische Studiën*, **81**, 89–103.
- Need, A. and de Jong, U. (2001). Educational differentials in the Netherlands. testing rational action theory. *Rationality and Society*, **13**, 71–98.
- Shadish, W. D., Cook, T. D. and Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin: Wadsworth.
- Stocké, V. (2007). Explaining educational decision and effects of families' social class position: an empirical test of the Breen-Goldthorpe model of educational attainment. *European Sociological Review*, **23**, 505–519.
- Traag, T. et al. (2005). Waarom doet opleiding ertoe? Een verklaring voor het effect van het hoogst bereikte opleidingsniveau op de arbeidsmarktpositie van schoolverlaters. *Pedagogische Studiën*, **82**, 453–469.
- Ultee, W. C. and Ganzeboom, H. B. G. (1992). *Netherlands Family Survey 1992–1993*. Utrecht: ICS Codebook, 17.
- van de Werfhorst, H. and Andersen, R. (2005). Social background, credential inflation and educational strategies. *Acta Sociologica*, **48**, 321–340.
- Vrooman, J. C. and Dronkers, J. (1986). Changing educational attainment processes: some evidence from the Netherlands. *Sociology of Education*, **59**, 69–78.
- Wolbers, M. H. J. (2008). Increasing labor market instability among young people? Labor market entry and early career development among school-leavers in the Netherlands since the mid-1980s. In Blossfeld, H.-P., Bucholz, S., Bukodi, E. and Kurz, K. (Eds.), *Young Workers, Globalization and the Labor Market: Comparing Early Working Life in Eleven Countries*. Cheltenham, UK/ Northampton, MA, USA: Edward Elgar, pp. 77–101.

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